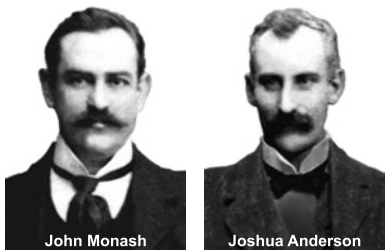


# Monier Arch Bridges in Bendigo

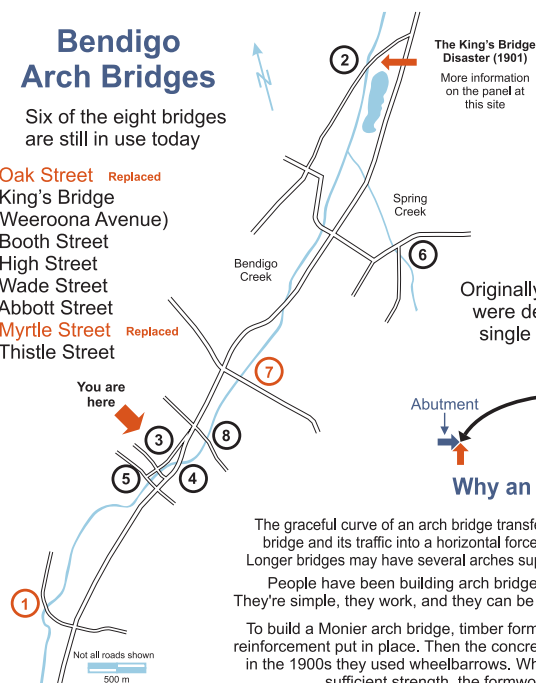


## Early Use of Reinforced Concrete in Victoria

### Bendigo Arch Bridges

Six of the eight bridges are still in use today

1. Oak Street Replaced
2. King's Bridge (Weeroona Avenue)
3. Booth Street
4. High Street
5. Wade Street
6. Abbott Street
7. Myrtle Street Replaced
8. Thistle Street



The King's Bridge Disaster (1901)  
More information on the panel at this site

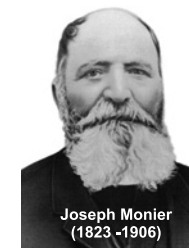
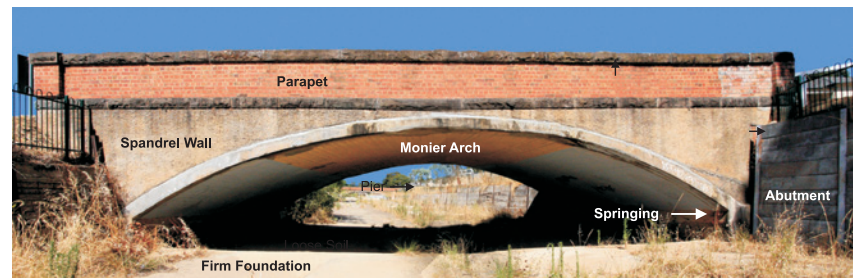
Originally all eight bridges were designed as wide single arch structures



The graceful curve of an arch bridge transfers some of the weight of the bridge and its traffic into a horizontal force resisted by the abutments. Longer bridges may have several arches supported by piers in the middle.

People have been building arch bridges for thousands of years. They're simple, they work, and they can be quite pleasing in appearance.

To build a Monier arch bridge, timber formwork was erected and steel reinforcement put in place. Then the concrete was poured into the form – in the 1900s they used wheelbarrows. When the concrete had gained sufficient strength, the formwork was removed.



### From Pots to Ponto

French horticulturalist Joseph Monier devised a method of making flower pots and garden furniture by using a mesh of thin iron rods to reinforce concrete. He took out a patent in 1867 and continued to find new uses for the method which makes the best use of each material.

The technique was soon applied to other structures and in 1875 Monier designed the first iron-reinforced concrete bridge (*pont* is the French word for *bridge*).

In the early 1890s the Sydney firm of Carter Gummow & Co acquired the rights to build Monier bridges in Australia.

In 1897 Monash & Anderson forged a link with them and obtained sole rights to the Monier patent in Victoria.



From the Reinforced Concrete and Monier Pipe Construction Co Collection

### Building the Bendigo Bridges

Bendigo Creek, which runs through the centre of the city, was subject to sudden floods. In the 1890s the city obtained a loan from the Government to straighten and line the creek and build eight bridges (one was over Back Creek, now Spring Creek). The bridges were built between 1901 and 1902. The King's Bridge (now Weeroona Avenue) failed during its load test and had to be rebuilt – see story at Weeroona Avenue.



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